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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/064,663

08/05/2002

John C. Tsai

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10/04/2004

INTELLECTUAL PROPERTY LAW OFFICE
1901 S. BASCOM AVENUE, SUITE 660
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EXAMINER

LEUNG, QUYEN PHAN

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,663

Applicant(s)

TSAI ET AL.

Examiner

Quyen P. Leung

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2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 22, 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Siebert (4,309,108). Siebert discloses the claimed invention. Note figure 9 which shows an optical device comprising a splitter interface (dotted line across beam splitter 102) adjoining a first region and a second region; a front cavity interface(interface between 24D and beam splitter 102); and a rear cavity interface (interface between 24D

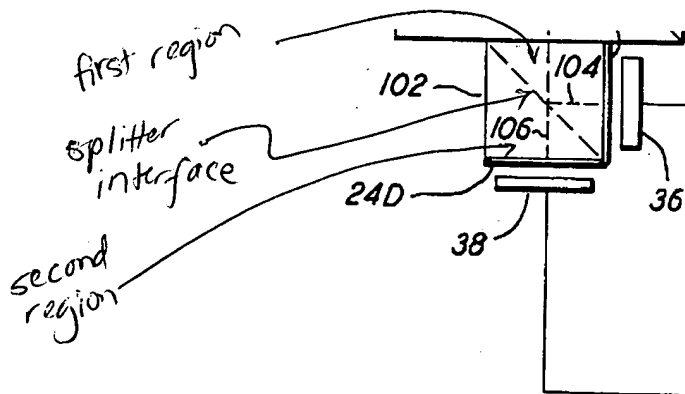


FIG. 9

and air, and photodetector 38).

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3. Claims 1, 22, 34 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Dowd (WO 200128052 A). O'Dowd discloses the claimed invention. Note figure 1 which illustrates a splitter interface (161) and a front cavity interface (interface between beam splitter 161 and FP etalon 120) and a rear cavity interface (interface between FP etalon 120 and beam splitter 171).

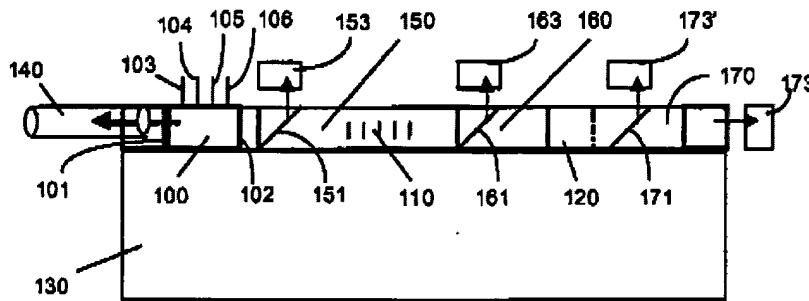


Figure 1

4. Claims 1-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Myatt et al(6,621,580). Myatt et al discloses the claimed invention. Note figure 7 which

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illustrates a beam splitting interface (112), a front cavity interface (at 104,108) and a

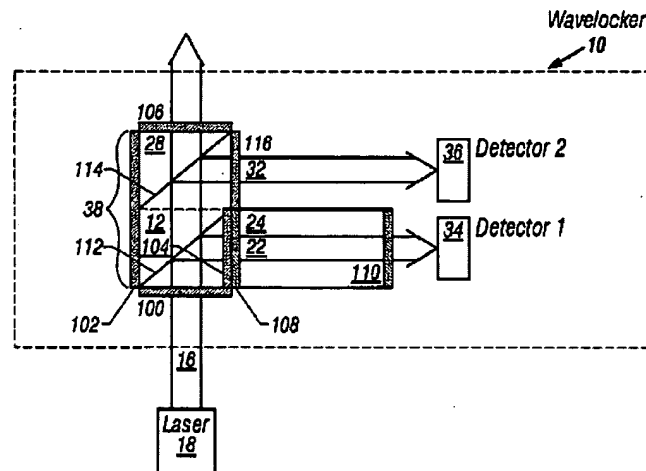


FIG. 7

rear cavity interface (at 110).

Re the splitter interface coating, see col. 7 lines 28-50:

A variety of different coatings, in one or more layers, can be applied to one or more surfaces of beam splitters 12, 28 and 38 and interferometric optical element 24 (FIG. 7). Suitable coatings 112 and 114 applied to beam splitters 12, 28 and 38 include but are not limited to a single layer of tantalum pentoxide with a thickness of 0.29 waves, measured at normal incidence. The coatings 112 and 114 may be substantially non-polarizing so as to eliminate polarization dependent differences between the power in optical beams 22 and 32. Alternatively, coatings 112 and 114 may be polarization dependent, but substantially identical at reflective surfaces in beam splitters 12, 28 and 38 so that the changes in the optical powers of beams 22 and 32 are substantially identical. Suitable coatings 108 and 110 applied to the interferometric optical element 24 include but are not limited to multi-layer coatings involving tantalum pentoxide, silicon dioxide, silicon nitride, silicon, and titanium oxide. Anti-reflection (AR) coatings 100, 102, 104, 106 and 116 can be applied to the input and output surfaces of beam splitters 12, 28 and 38 and interferometric optical element 24. The AR coatings may be applied to minimize stray reflections, minimize insertion loss, and prevent unwanted interferences.

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Re the coating being polarized, see col. 7 lines 37-38.

Re the front cavity interface including an antireflective coating, see coating (104) above.

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Re at least one of the front cavity interface and rear cavity interface including a partially reflective coating, see coatings (108, 110) above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quyen P. Leung whose telephone number is (571)272-1943. The examiner can normally be reached on 8-4:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on (571)272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Quyen P. Leung
Primary Examiner
Art Unit 2828

QPL